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CONTENTS

FIRST CONFIRMED RECORD OF THE PAINTED COURTESAN BUTTERFLY *EURIPUS CONSIMILIS* (LEPIDOPTERA: NYMPHALIDAE) FROM CHHATTISGARH, INDIA by Gaurav Nihlani, Hritik Ronald Ekka, & Bhagirathi Jaiswal……111

NEW SIZE RECORDS OF WINGSPAN VARIATION IN BUTTERFLY SPECIES (NYMPHALIDAE, PAPILIONIDAE AND PIERIDAE) FROM RIVER GAULA, NAINITAL, UTTARAKHAND by Divya Rawat, Ranjana Goswami & Chandra Singh Negi 115

FIRST CONFIRMED RECORD OF THE DULL BABUL BLUE BUTTERFLY *AZANUS URANUS* (LEPIDOPTERA: LYCAENIDAE) FROM CHHATTISGARH, INDIA by Gaurav Nihlani, Faiz Bux, Bhagirathi Jaiswal & Ritesh Kumar Shrivas 120

NEW DISTRIBUTION RECORDS OF *CALONOLA ECTROCTA* AND *MEGANOLA MAJOR MAJOR* (LEPIDOPTERA: NOLIDAE) FROM MAHARASHTRA, INDIA by Rahul Babanrao Bhende & Ashish Diliprao Tiple 124

ADDITION OF THE TAILED PALMFLY *ELYMNIAS CAUDATA* (LEPIDOPTERA: NYMPHALIDAE) TO THE BUTTERFLY FAUNA OF CHHATTISGARH, INDIA by Gulab Chand, H.N. Tandan & Sheela Dubey.....130

FIRST RECORD OF *ANTHENE LYCAENINA* (LEPIDOPTERA: LYCAENIDAE) FROM RAJASTHAN, INDIA by Mukesh Panwar & Diksha Jangpangi.....133

NEW RECORDS OF TWO SKIPPER BUTTERFLIES (LEPIDOPTERA: HESPERIIDAE) FROM BANGLADESH Uzzal Das & Avijit Dutta Borshon.....135

NEW ELEVATION RECORD FOR *MATAPA ARIA* (LEPIDOPTERA: HESPERIIDAE) FROM UTTARAKHAND by Diksha Jangpang 140

BUTTERFLY (LEPIDOPTERA: PAPILIONOIDEA) DIVERSITY, CHECKLIST OF SPECIES AND FAMILY REPRESENTATION AT THE ANNAPURNA ECO-VILLAGE IN ASTAM, NEAR POKHARA, NEPAL by Piet Van Der Poel.....142

A PRELIMINARY REPORT ON NECTAR FEEDING BUTTERFLIES (INSECTA: LEPIDOPTERA: PAPILIONOIDEA) VISITING FLOWERS OF *OXALIS DEBILIS* IN BIBUTIBHUSHAN WILDLIFE SANCTUARY, WEST BENGAL, INDIA by Tanmoy Bhowmick 182

A PRELIMINARY REPORT ON NECTAR FEEDING BUTTERFLIES (INSECTA: LEPIDOPTERA: PAPILIONOIDEA) VISITING FLOWERS OF *OXALIS DEBILIS* IN BIBUTIBHUSHAN WILDLIFE SANCTUARY, WEST BENGAL, INDIA

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Reviewer: Peter Smetacek

Bibhutibhushan Wildlife Sanctuary (23.1861°N, 88.7620°E) is a protected area in North 24 Parganas district, West Bengal, India, spread over 0.64 km^2 and located on the bank of Ichamati River. It is a part of Lower Gangetic Plains physiographic zone with a variable altitude between 50-90 feet above sea level, and the forest type is tropical deciduous (Ahmed *et al*., 2024; Talukdar & Sanyal, 2013). About 209 species of angiosperms containing 59 trees, 98 herbs, 34 shrubs, 15 climbers and 3 creepers are found in this forest (Talukdar & Sanyal, 2013). Several taxa have been reported from this sanctuary including protozoans, plants, insects (Collembola, Odonata, Hemiptera, Dermaptera, Coleoptera, Diptera, Lepidoptera and Hymenoptera), spiders, earthworms, birds and mammals (Ahmed *et al.*, 2024; Chakraborty *et al.*, 2016; Chaudhury & Purushothaman, 2024; Dey & Emiliyamma, 2024; Bhunia *et al*., 2025; Ghosh *et al.*, 2025; Ghosh *et al.*, 2011; Mandal, 2011; Mallick, 2019; Mandal *et al.*, 2011; Mitra *et al.*, 2011; Mitra *et al.*, 2015; Mitra & Parui, 2012; Mitra *et al.*, 2018; Mukhopadhyay & Majumdar, 2016; Saha *et al.*, 2019; Talukdar & Sanyal, 2013; Yadav *et al.*, 2018).

Oxalis debilis Kunth, 1822 is a perennial herb, belongs to family Oxalidaceae, native from Central America to Guyana and Paraguay, and introduced to several countries including India. This is one of the five species of *Oxalis* reported from West Bengal state of India (Ghara, 1997; POWO, 2025). Flowers are 1.5 cm in diameter and flowering happens from May to February (Ghara, 1997).

During a visit to Bibhutibhushan Wildlife Sanctuary on 8 February 2022, between 11:00hrs to 13:00hrs, the author observed and documented 6 species of native butterflies (Insecta: Lepidoptera) feeding on nectar from the flowers of *O. debilis*, which formed dense patches on the soil on both sides of a walking path inside the sanctuary (Figure 1 and 2). These nectar feeding species of butterflies are *Oriens gola* (Moore, 1877) (Hesperiidae), *Matapa aria* (Moore, 1866) (Hesperiidae), *Graphium agamemnon* (Linnaeus, 1758) (Papilionidae), *Catopsilia pomona* (Fabricius, 1775) (Pieridae), *Eurema blanda* (Boisduval, 1836) (Pieridae) and *Megisba malaya* (Horsfield, 1828) (Lycaenidae) (Figure 3-10). Butterflies were identified following Kehimkar (2016) and taxonomy is followed from Smetacek (2025). *O. debilis* was identified following Ghara (1997) and POWO (2025). Photographs were captured with a Nikon Coolpix B500 camera. Previously nectar-

feeding butterflies of *O. debilis* were not known. In the present communication, 6 species of butterflies under 4 families are reported for the first time as nectar-feeding butterflies of this herbaceous plant. In addition, *O. gola* and *E. blanda* are newly reported from Bibhutibhushan Wildlife Sanctuary, as Mitra *et al.* (2015) did not included these species in their study. More studies are needed to understand the ecology of insects and their interactions with the plants of this protected area.

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Figure 1: Patches of *Oxalis debilis* on the soil of both sides of the walking path. © Tanmoy Bhowmick

Figure 2: Flowering *Oxalis debilis* in Bibhutibhushan Wildlife Sanctuary. © Tanmoy Bhowmick

Figure 3: *Oriens gola* feeding on nectar. © Tanmoy Bhowmick

Figure 4: *Oriens gola* feeding on nectar. © Tanmoy Bhowmick

Figure 5: *Matapa aria* feeding on nectar. © Tanmoy Bhowmick

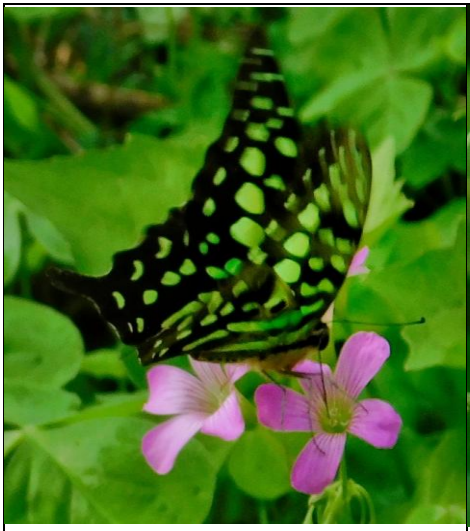

Figure 6: *Graphium agamemnon* feeding on nectar. © Tanmoy Bhowmick

Figure 7: *Catopsilia pomona* feeding on nectar. © Tanmoy Bhowmick

Figure 8: *Catopsilia pomona* feeding on nectar. © Tanmoy Bhowmick

Figure 9: *Eurema blanda* feeding on nectar. © Tanmoy Bhowmick

Figure 10: *Megisba malaya* feeding on nectar. © Tanmoy Bhowmick